

handpicked the best representatives for observation). Furthermore, the validity of the sample would be called into question if the auditors selected the five representatives from a single BOC center, instead of three BOC centers as the procedures required. As noted above, a cluster sample poses more risk of sampling error than a simple random sample whenever units from the same cluster are more homogeneous than units from different clusters.

38. Because of the deficiencies in the sampling methodologies and the auditors' deviations from agreed-upon procedures, the audit findings are highly suspect. As a consequence, the audit findings provide no sound basis upon which any conclusion can be reached that Verizon has complied with its Section 272 obligations.

#### **IV. THE PERFORMANCE DATA SHOW THAT VERIZON HAS DISCRIMINATED AGAINST ITS COMPETITORS.**

39. Even the performance data in the audit reports reveal that Verizon has violated the non-discrimination provisions of Section 272. Section 272 (c) establishes an "unqualified prohibition against discrimination by a BOC in its dealings with its Section 272 affiliate and unaffiliated entities." Implementation of the Non-Accounting Safeguards of Section 271 and 272 of the Communications Act of 1934 as Amended, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 21905, ¶ 197 (1996). The Commission has also emphasized that a "stringent standard" must be applied in evaluating compliance with this anti-discrimination provision. *Id.* When making comparisons of Verizon's performance for non-affiliates and affiliates, it is important to use statistical procedures. By allowing for variability in the services received by customers, statistical analysis can control the risk of rendering an inappropriate conclusion.

publicly-filed tariff rates and the amounts the BOCs charged to themselves for access, switching and transport, the sample is far too small to draw such an inference for the entire population.

36. The audits are flawed in other respects that suggest the audit findings are untrustworthy. The *General Standard Procedures* provide that, as to cash disbursements, the auditors should "judgmentally select 10 cash disbursements *and* 5 payroll transactions of the 272 affiliate and verify that these transactions were funded by and appropriately reflected in the general ledger of the 272 affiliate." *General Standard Procedures*, Objective II, Procedure 3. The auditors deviated from these requirements by examining "10 cash disbursements (*including* 5 payroll)" instead of "10 cash disbursements *and* 5 payroll transactions." Initial Biennial Report, App. A, Objective II, Procedure 3. Significantly, this deviation reduced the non-payroll cash disbursements by a factor of two; and, therefore, undermined the accuracy of reported results.

37. In addition, the *General Standard Procedures* include provisions that are purportedly designed to assess whether Verizon markets its affiliate's interLATA services to inbound callers without informing them of their right to select the interLATA carriers of their choice. *General Standard Procedures*, Objective VII at 37 (citation omitted). To test compliance with this requirement, the auditors were required to listen for 30 minutes each to calls received by five randomly selected representatives at each of three randomly selected BOC call centers. *General Standard Procedures*, Objective VII, Procedure 8. However, instead of observing fifteen representatives (five at three BOC centers), the auditors "remotely observed" only five customer service representatives. Initial Biennial Report, App. A, Objective VII, Procedure 8. To make matters worse, the audit report does not state that the representatives were randomly selected. As a consequence, it is possible that a Verizon supervisor could have

from 45 transferred employees. Initial Biennial Report, App. A, Objective III, Procedure 5. As noted above, a statistically valid sample should have included at least 93 employees if the population of transferred employees is large. Unfortunately, the audit report does not provide the size of the population.<sup>15</sup> In all events, the audit report provides no justification for the auditors' decision to select a sample size as small as 45.

35. Objective X, Procedure 6 of the *General Standard Procedures* required the auditors "by using a statistically valid sample of interLATA services offered by the BOC and not through an affiliate, [to] determine whether the BOC is imputing (charging) to itself an amount for access, switching and transport" and compare such rates to those charged to other interexchange carriers. *General Standard Procedures*, Objective X, Procedure 6. The auditors selected three interLATA services: Common Channel Signaling Access Service Gateway Access Service, F911 InterLATA Information Service, and NDA. The audit report does not state explicitly how many qualifying interLATA services were offered by the BOC, but implies that there may have been more than three such services. If that is the case, the auditors failed to conduct statistically valid sampling. Initial Biennial Report, App. A, Objective X, Procedure 6. There is no indication that the three services were selected at random, and, even if they were, a sample of three services would not come close to meeting the precision requirements for a statistically valid sample. Consequently, although the auditors found no differences between

---

<sup>15</sup> In addition, the auditor deviated from the requirements of the *General Standard Procedures* by relying on written confirmations rather than face-to-face interviews. Reliance on written confirmations may have reduced the chances of detecting inappropriate disclosure of proprietary information because, unlike a face-to-face interview, written confirmation does not provide the opportunity to evaluate credibility.

invoices) was not called for by the *General Standard Procedures*. Furthermore, the audit report raises a number of questions regarding how the sampling was conducted. A sample of 100 billed items clustered in 54 invoices may be less informative than a simple random sample of 100 billed items. More fundamentally, it is unclear whether the resulting sample was drawn at random, with each billed item having the same chance of being selected. Although the audit report states that billed items were selected at random "from 54 selected July 2000 invoices," the audit report is silent as to whether the 54 invoices were selected at random. *Id.* Also, depending on how the sampling was conducted, some items (e.g. those from invoices with fewer items) may have had a greater chance of being selected than others. If so, this phenomenon would bias results from the sample.<sup>12</sup>

34. Additionally, Section 272(b)(3) requires an interLATA affiliate to "have separate officers, directors, and employees from the Bell operating company of which it is affiliate." 47 U.S.C. § 272(b)(3). The *General Standard Procedures* required the auditors to select a statistically valid sample of the employees who transferred from the BOC and determine, through interviews, whether they used any proprietary information that they acquired while employees of the BOC. *General Standard Procedures*, Objective III, Procedure 5. The auditors implemented this procedure by selecting a random sample of and obtaining written confirmation

---

<sup>12</sup> The audit report is also confusing at this point. On the one hand, the report refers to "unaffiliated Interexchange Carriers," and, therefore, suggests that more than one such carrier was included in the reported results. On the other hand, the report refers to the "unaffiliated Interexchange Carriers" ("IXC") invoice and implies that a single invoice was examined for a single carrier. If only one IXC was examined, it is unclear how it was selected. *Id.*

Enterprise customers comprise less than the full population, the reported results could be seriously biased. The audit report offers no information about the numerical or financial size of the omitted part of the universe (non-Enterprise customers). Finally, the audit report states that copies of Customer Service Records were obtained only for those Enterprise customers who purchased local services from the BOC. Consequently, the sample for which rates, terms, and conditions for non-affiliates matched those for affiliates may be much less than 100 customers. Again, information is lacking about the actual number of comparisons made.

32. The audits are also seriously flawed because of other instances where the auditors failed to use statistically valid samples in accordance with audit procedures. In that connection, the audits were supposed to assess whether Verizon discriminates in favor of its Section 272 affiliates by providing exchange access services to competitors at rates higher than those offered to Section 272 affiliates. *General Standard Procedures*, Objective IX. The audits purported to test Verizon's compliance with this requirement through a number of procedures.

33. One such procedure required the auditors "[u]sing a statistically valid sample of billed items, [to] inspect underlying details of invoices and compare rates charged, and terms and conditions applied to each Section 272 affiliate with those charged and applied to IXC's for the same services and note any differences." *General Standard Procedures*, Objective IX, Procedure 3. The auditors randomly selected 100 Billing Authority Numbers ("BANS") and for the selected BANS obtained the July 2000 invoices for exchange access services and facilities rendered by the BOC to the Section 272 affiliates. *Initial Biennial Report*, App. A, Objective IX, Procedure 3. The auditors then selected a random sample of 100 billed items from 54 selected July 2000 invoices. This cluster sampling procedure (i.e. sampling billed items from a sample of

render it impossible to determine whether Verizon actually has complied with Commission requirements.

30. Objective VII in the *General Standard Procedures* assesses whether the BOC discriminated against nonaffiliates in favor of its Section 272 affiliates during the provisioning and procurement process. Under the *General Standard Procedures*, the auditors were required to select a statistically valid sample of purchases of goods or services from the BOC by unaffiliated carriers and compare the rates, terms, and conditions of such purchases to those offered to the Section 272 affiliate. (*General Standard Procedures*, Objective VII, Procedure 5. Instead of selecting a simple random sample of purchases, the auditors selected a cluster sample which could not be expected to satisfy the precision requirements for a statistically valid sample. In this regard, the auditor first "selected a random sample of 116 unaffiliated entities who contracted or renewed their billing and collection contracts in 2000" and then "selected a random sample of 100 Enterprise customers from the listing of unaffiliated entities referenced above." *Id.* The audit report provides no information regarding the number of customers that were sampled from each unaffiliated entity. Drawing a cluster sample would increase the uncertainty of the results if customers from the same entity are more homogeneous than customers from other entities. The potential impact of this problem is greater if the total number of entities is large (so that a large number had no sampled customers) or if some entities had substantially more customers sampled than did others (so that the vast majority of customers came from very few entities). Unfortunately, the audit report fails to provide such information.

31. Moreover, the auditors limited the second sample to "Enterprise customers" — a term that is not even referenced in the *General Standard Procedures*. If

28. Although it is far from clear, it appears that the auditors failed to obtain the required judgmental sample of "debt instruments, leases and credit arrangements that are less than \$500,000 in annual obligations." Initial Biennial Report, App. A, Objective IV, Procedure 3.<sup>22</sup> Thus, no valid conclusions can be drawn as to whether any debt agreements, leases and credit arrangements falling below the \$500,000 threshold included provisions permitting recourse to the BOC's assets.

29. Additionally, the auditors requested confirmation from 78 major suppliers and lessors. The audit report does not state explicitly whether the auditors canvassed *all* major suppliers and lessors as required, however, the report implies otherwise by referring to "78 major suppliers and lessors to which confirmation requests were sent." Initial Biennial Report, App. A, Objective IV, Procedure 3. If the 78 major suppliers and lessors represented only a sample of the given population, the audit report offers no assurance that the sample was drawn randomly. The audit report also states that 34 suppliers and lessors confirmed that they did not have recourse against the BOC's assets. *Id.* Because suppliers and lessors may have been reluctant to respond if their agreements violated requirements precluding recourse to the assets of the BOC, the auditors' findings based upon less than half of those queried raise the prospect that the results are biased and wholly unreliable. As a consequence, although the auditors uncovered no affiliate agreements that permitted recourse to the assets of the BOC, the deficiencies in the audit process

---

<sup>22</sup> The auditors' findings regarding the testing of Objective IV, Procedure 3, glaringly omit any reference to any analysis of debt agreements, leases, and credit agreements falling below the \$500,000 threshold.

examining all fixed assets in accordance with audit procedures, the auditors randomly sampled 100 transmission and switching facilities from the BACN1 detailed listing of fixed assets and collected the associated invoices. *Id.* The auditors further compounded this error by imposing an artificial cost ceiling of \$20,524 for the assets that were sampled. Because the auditors failed to examine the entire population and imposed arbitrary limits on the data that were sampled, no meaningful conclusions about the complete population can possibly be drawn from the sampled data.

27. Objective IV in the *General Standard Procedures* is designed to assess whether the Section 272 affiliate has obtained credit pursuant to any arrangement that would allow a creditor recourse to the assets of the BOC in the event of default. The audit procedures required the auditors to document each Section 272 affiliates' debt agreements with major suppliers. In addition, the auditor was required "[f]or all debt instruments, leases, and credit arrangements maintained by each Section 272 affiliate in excess of \$500,000 of annual obligations and for a sample of 10 debt instruments, leases, and credit arrangements that are less than \$500,000 in annual obligations (judgmental sample), [to] obtain (positive) confirmation from loan institutions, major suppliers, and lessors to attest to the lack of recourse to the BOC assets."

*General Standard Procedures*, Objective IV, Procedure 3.



include the exclusion of elements from the sampling frame, the failure to draw a random sample, and the use of samples that are too small to support the inferences drawn therefrom.

Furthermore, because the audits fail to disclose rudimentary information regarding the sampling procedures that were implemented, it is impossible to verify the validity of the sampling application.

**B. Material Deviations from the Fundamental Principles of Sampling and the General Standard Procedures**

24. The auditors violated a basic sampling principle by systematically excluding elements of the population from the sampling frame. Consequently, the samples do not represent the complete population, and the inferences that the auditors attempt to draw regarding the entire population are invalid.

25. In this regard, Section 272(b)(1) provides that the interLATA affiliate must "operate independently from the Bell operating company." 47 U.S.C. § 272(b)(1). As the *General Standard Procedures* explain, this requirement precludes joint ownership of switching and transmission equipment, as well as the land and buildings where such facilities are located. See *General Standard Procedures* at 19.

26. Objective I in the *General Standard Procedures* purportedly tests compliance within these requirements. In that connection, the audit procedures required the auditors to obtain a detailed listing of all fixed assets and verify, *inter alia*, the source from which each asset was acquired.<sup>30</sup> *General Standard Procedures*, Objective I, Procedure 7. Rather than

---

<sup>30</sup> Although the audit procedures required an examination of title documents, the auditors did not sample title documents, but instead used "related invoices." Initial Biennial Report, App. A, Objective I, Procedure 7.

criteria in the audit procedures would call for a sample size of at least 93 (when the population is large).

21. When the population is not too large, smaller sample sizes could meet the criterion. The reason is that the mean (or proportion) for the complete population consists of a part that is known (i.e. the sample) and a part that needs to be estimated from the results for the sample. If the sample constitutes a substantial fraction of the population, there is less uncertainty, and a somewhat smaller sample can achieve the desired precision level.

22. Certain information about the population, sampling method and the sample is required to assess the validity of any inferences drawn from the sampled data. For example, the sizes of the population and sample are required to evaluate the validity of a simple random sample (where each unit is sampled independently with the same probability). For more complicated sampling procedures, more detailed information is needed. For example, the following information is essential in evaluating the validity of a cluster sample:<sup>9</sup> the number of clusters in the population; the number sampled; the distribution of cluster size; how individuals were sampled from clusters; the number of individuals in the population, and the number of individuals sampled.

23. As described in more detail below, the audits consistently violated accepted sampling techniques and otherwise deviated from agreed-upon procedures. These deficiencies

---

<sup>9</sup> Cluster sampling is a technique that involves two stages of sampling. In stage 1, a sample of clusters is selected at random from the population of clusters. In stage 2, individual units are sampled at random from each of the clusters sampled in stage 1. For example, a sample of employees in an industry might be selected by sampling companies in the industry and then sampling employees from the sampled companies.

procedures.<sup>7</sup> Whenever judgmental sampling is used, it is difficult to assess the propriety of the sample unless detailed information is provided regarding the criteria that were used to select the sample.

19. Before selecting a sample, the auditors should determine the acceptable level of uncertainty associated with the results and the sample size that is likely to achieve that level. With this principle in mind, the *General Standard Procedures* contain certain criteria that must be met in selecting a statistically valid sample. The procedures state that, where appropriate, the auditors "shall select a statistically valid sample using random and stratified sampling techniques with the following parameters: a desired confidence level equal to 95%; a desired upper precision limit equal to 5%; and an expected error rate of 1%."<sup>8</sup>

20. It is unclear precisely how these criteria should be implemented when setting sample sizes. The problem is that the upper precision limit depends on the *observed* error rate -- not the expected error rate. This is easiest to understand for samples from a large population. If no errors are observed, a minimum sample size of 59 is required to achieve the desired upper precision limit of 5% with a confidence level of 95%. If even a single error is observed, the sample size required to achieve the desired upper precision limit grows to 93. Because one error in 93 tries is approximately one-percent, the most liberal interpretation of the

---

<sup>7</sup> See *General Standard Procedures*, Objective II, Procedure 3 at 22 and Objective IV, Procedure 3 at 26-27. In certain instances the *General Standard Procedures* specify the size of the "random" or "judgmental" sample. *Id.*, Objective II, Procedure 3 at 22 ("judgmental"); Objective VII, Procedure 8 at 39-40 ("random").

<sup>8</sup> *General Standard Procedures* at 9, ¶ 8.

that are substantially different from those of the sampled group, any inferences that the audit attempted to draw about all adolescents would be inaccurate and misleading.<sup>5</sup>

17. In order for a sample to be representative of the population from which it is drawn, a sample should be selected at random. Samples selected by other means (e.g. judgmental samples) run the risk of systematically over-representing certain elements in a population, while under-representing others. The *General Standard Procedures*, in apparent recognition of this risk, require the auditor to use random sampling (or stratified random sampling) techniques for most samples.<sup>6</sup>

18. In certain circumstances — particularly where only a very small sample can be selected — it may be appropriate to use judgmental sampling. For example, if the objective of an audit is to conduct case studies of state departments of education, the auditor may determine that, due to time and resource constraints, the evaluation of this governmental agency must be limited to four states. The auditor could use a judgmental sample to ensure that the four selected states have different population sizes and represent each geographical region of the United States. The *General Standard Procedures* call for the use of judgmental samples for a number of test

---

<sup>5</sup> See D. GUY, ET. AL., *AUDIT SAMPLING* 20-21 (2002) (noting that “[a]uditors must exercise caution to avoid projecting sample results to a population if all population items did not have a chance of being included in the sample,” and that, as an example, “it would be improper to conclude that all sales were properly recorded if the sample were selected only from charge sales and excluded cash sales”).

<sup>6</sup> *General Standard Procedures*, Objective I, Procedure 7 at 21; Objective III, Procedures 5 and 6 at 25; Objectives V & VI, Procedures 9, 10 and 12 at 33-34; Objective VIII, Procedures 4 and 5 at 43-44; Objective IX, Procedures 2 and 3 at 46; Objective X, Procedures 3 and 6 at 48, and Objective XI, Procedures 2 and 3 at 51. What probably also falls within this rubric is the instruction to the auditor to conduct “a valid sample.” Objective VII, Procedure 5 at 39.

audit procedures (*i.e.* statistical and judgmental sampling)<sup>4</sup> In conducting both statistical and judgmental sampling, the auditors violated fundamental sampling techniques. As a consequence, the findings that are based upon these flawed sampling procedures are either unreliable or invalid. In order to place these issues in context, a discussion of fundamental principles governing sampling methodology follows.

**A. Fundamental Principles Governing Sampling**

15. Generally, a sample should satisfy three criteria: (1) the sample should be drawn from the population of interest and should not systematically exclude any part of the population; (2) the sample should be drawn at random; and (3) the sample should be large enough to support the conclusions that might be drawn.

16. Statistical inferences based on a sample are valid only with respect to the population from which the sample is drawn. If the sample systematically excludes certain elements in the target population, no inferences can be drawn regarding the excluded elements. For example, if the objective of an audit is to determine the level of drug use among 13 to 17 year-olds in a community, the auditors' reliance on information derived solely from a sample of public school students could skew the results. Because adolescents who are excluded from the sample -- dropouts and children in private and home schools -- could have drug-use patterns

---

<sup>4</sup> Judgmental sampling is also known as nonstatistical sampling.

13. Additionally, to test compliance with Objectives V and VI, the auditors were required to compare the balance sheet of the Section 272 affiliate with "a detailed listing of all fixed assets which agrees with the amount shown in the balance sheet." *General Standard Procedures*, Objectives V and VI, Procedure 13 at 34. The auditors were also required to determine whether any fixed assets transferred to the Section 272 affiliates constituted "indirect" transfers from the BOC through other affiliates. *Id.* at 35. Instead of examining *all* fixed assets, the auditors "selected a random sample of 86 fixed assets transferred from other non-regulated affiliates." Initial Biennial Report, App. A, Objectives V and VI, Procedure 13. To make matters worse, because management reportedly could not locate invoices for 14 of the selected fixed assets, the auditors examined only those invoices that were associated with 72 fixed assets. Although the auditors found no instances where the assets of the Section 272 affiliates had been transferred indirectly from the BOC, the audit findings are questionable because the entire universe of fixed assets was never examined. Furthermore, even the auditors' analysis of the sampled data is incomplete because of management's failure to produce data. Initial Biennial Report, App. A, Objectives V and VI, Procedure 13.

**III. THE AUDITS ARE FLAWED BECAUSE OF DEFECTS IN THE  
SAMPLING METHODOLOGY AND DEVIATIONS FROM  
PRESCRIBED PROCEDURES.**

14. Not only did the auditors fail to examine the entire population when evaluating certain test criteria, but they also used sampling methodologies that are riddled with errors and otherwise deviated from the agreed-upon procedures. The *General Standard Procedures* refer to two general types of sampling techniques that should be used to test certain

Objective II, Procedure 3.<sup>3</sup> However, the auditors' failure to evaluate all collections undermines the credibility of this finding.

12 Similarly, Objective V of the audits purportedly assesses whether the Section 272 affiliate "has conducted all transactions with the Bell operating company ["BOC"] on an arm's length basis with the transactions reduced to writing and available for inspection." *General Standard Procedures*, Objective V. Furthermore, Objective VI ostensibly evaluates whether the BOC has properly "accounted for all transactions with the separate affiliate in accordance with the accounting principles and rules approved by the Commission." *Id.*, Objective VI. The audit procedures for Objectives V and VI required that the auditors compare the prices, terms and conditions of services and assets on the website of the interLATA affiliate to all written agreements between the BOC and affiliates for interLATA and exchange access facilities and services. *General Standard Procedures*, Objectives V and VI, Procedure 6. Additionally, the auditors were required to assess whether this same information was made available for public inspection at the BOC's headquarters. *Id.* Instead of examining all web postings, the auditors obtained a random sample of 85 web postings and concluded that four web postings, along with their associated agreements and Officer Certification Statements, were not available for public inspection at the BOC's headquarters. Initial Biennial Report, App. A, Objectives V and VI, Procedure 6 at 18. However, because the auditors failed to examine all web postings in accordance with prescribed procedures, it is quite possible that other transaction data posted on the affiliates' website violated Commission requirements.

---

<sup>3</sup> As noted in Part III, even the sampling techniques the auditors used in testing compliance with Objective II, Procedure 3 violated the *General Standard Procedures*.

compliance with other test criteria. However, in several instances, the auditors failed to examine the entire universe in measuring Verizon's compliance with those test objectives.

10. In this regard, Section 272(b)(2) provides that interLATA affiliates must "maintain books, records, and accounts in the manner prescribed by the Commission which shall be separate from the books, records, and accounts maintained by the Bell operating company of which it is an affiliate." 47 U.S.C. § 272(b)(2). See also *General Standard Procedures*, Objective II at 22. Objective II of the audits is purportedly designed to assess compliance with this requirement. The *General Standard Procedures* provide that the following procedure should be used to assess compliance with this objective:<sup>2</sup>

Cash Receipts — For the ninth month of the engagement period, [the auditor should] obtain a list of *all* collections from the sale of trade accounts receivable from the 272 affiliate to the affiliate. Document the process for how the 272 affiliate receives credit for these collections and verify that collection of the trade accounts receivable was reflected in the accounts of the 272 affiliate (emphasis added).

11. Although the audit procedures explicitly required the auditors to "obtain a list of *all* collections from the sale of trade accounts receivables from the 272 affiliate to the affiliate," the auditors randomly selected 10 cash receipts and 10 cash disbursements from BACT's account at F&I. After comparing the selected receipts and disbursements against BACT's records, the auditors found no violations of record-keeping requirements. Initial Biennial Report, App. A,

---

<sup>2</sup> *General Standard Procedures*, Objective II, Procedure 3.



performance results are statistically significant. For all of these reasons, there is no sound basis upon which any finding can be reached that Verizon has complied with Section 272.

**II. THE AUDITORS FAILED TO EXAMINE THE ENTIRE POPULATION WHEN INSTRUCTED.**

8 The audits are fundamentally flawed because the auditors failed to adhere to audit procedures that required an examination of the entire population when evaluating Verizon's compliance with certain test criteria. In this regard, an auditor can use an array of techniques to collect and assess the evidential matter that forms the basis for audit findings. Audit sampling, which involves an examination of less than 100% of the elements or units in a given population, is one such technique. However, one of the risks of sampling is that the auditor may render an erroneous finding because the entire population was not examined.<sup>1</sup> In recognition of this risk and to assure greater accuracy in reported results, the audit plan may require an examination of the entire population at issue when assessing an entity's compliance with specified requirements.

9 The *General Standard Procedures for Biennial Audits Required Under Section 272 of the Communications Act of 1934, As Amended* ("General Standard Procedures") require that sampling techniques be used to evaluate certain test criteria. Furthermore, the audit procedures also specify that the total population of interest must be analyzed in assessing

---

<sup>1</sup> See AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS, AUDIT SAMPLING 10 (1999) (stating that "[s]ampling risk arises from the possibility that when a test of controls or substantive test is restricted to a sample, the auditor's conclusions might be different from those that would have been reached if the test were applied in the same way to all the items in the account balance or class of transactions").

National Academy of Sciences as well as the Academy's Panel to Review the 2000 Census. I have attached a copy of my curriculum vitae as Exhibit RMB-1

**I. PURPOSE AND SUMMARY OF DECLARATION**

5. The purpose of this declaration is to address certain statistical and non-statistical methodologies that the auditors used to collect and analyze the evidential matter that serves as the basis for findings in the Auditor's Initial Biennial Report and Auditor's Supplemental Biennial Report (collectively "the audits") in connection with the first biennial Section 272 audit of the Verizon companies. Part II explains that the audits at issue are fundamentally infirm because the auditors failed to comply with audit procedures that required an examination of all elements in the population when evaluating certain test criteria. As a result, the auditors not only deviated from prescribed agreed-upon audit procedures, but they also rendered findings that are inherently less accurate than they would have been if the entire population of interest had been analyzed.

6. Part III shows that, even when the auditors used sampling techniques, they consistently violated the most basic sampling standards and compounded these errors by deviating from other audit procedures. Because of these deficiencies which taint numerous test criteria, many of the audit findings that suggest compliance by Verizon with particular Section 272 obligations are misleading or meaningless.

7. Part IV explains that even the performance data in the audits reveal that Verizon has violated Section 272 by providing preferential treatment to Verizon affiliates. Although Verizon characterizes the performance results showing discriminatory treatment as "statistically meaningless," the limited data provided in the audits reveal that the differences in

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Implementation of the	)	
Telecommunications Act of 1996:	)	CC Docket No. 96-150
	)	
Accounting Safeguards Under the	)	
Telecommunications Act of 1996	)	

**DECLARATION OF ROBERT M. BELL  
ON BEHALF OF AT&T CORP.**

---

1. My name is Robert M. Bell. My business address is AT&T Labs-Research, 180 Park Avenue, Florham Park, New Jersey 07932.

2. I received a Ph.D. in Statistics from Stanford University in 1980.

3. From 1980 to 1998, I was promoted to Senior Statistician at RAND, a non-profit institution that conducts public policy analysis. While at RAND, I supervised the statistical design and/or analysis of many projects, including several large multi-site evaluations. I also headed the RAND Statistics Group from 1993 to 1995 and taught statistics in the RAND Graduate School from 1992 to 1998. In 1998, I joined the Statistics Research Department at AT&T Labs-Research, where I am a Principal Member of Technical Staff. My main research area is survey research methods.

4. I have authored or co-authored fifty articles on statistical analysis that have appeared in a variety of refereed, professional journals. I am a fellow of the American Statistical Association. I am currently a member of the Committee on National Statistics organized by the

## TABLE OF CONTENTS

	<u>Page</u>
I PURPOSE AND SUMMARY OF DECLARATION.....	2
II THE AUDITORS FAILED TO EXAMINE THE ENTIRE POPULATION WHEN INSTRUCTED .....	3
III THE AUDITS ARE FLAWED BECAUSE OF DEFECTS IN THE SAMPLING METHODOLOGY AND DEVIATIONS FROM PRESCRIBED PROCEDURES.....	6
A. Fundamental Principles Governing Sampling .....	7
B. Material Deviations from the Fundamental Principles of Sampling and the <i>General Standard Procedures</i> .....	11
IV THE PERFORMANCE DATA SHOW THAT VERIZON HAS DISCRIMINATED AGAINST ITS COMPETITORS.....	19
CONCLUSION .....	23

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Implementation of the	)	
Telecommunications Act of 1996:	)	
	)	CC Docket No. 96-150
Accounting Safeguards Under the	)	
Telecommunications Act of 1996	)	

**DECLARATION OF ROBERT M. BELL  
ON BEHALF OF AT&T CORP.**

April 8, 2002

## SERVICE LIST

William F. Caton  
Office of the Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, D.C. 20554<sup>1</sup>

Qualex International  
Portals II  
445 12<sup>th</sup> Street, SW, Room CY-B402  
Washington, D.C. 20554

Joseph P. DiBella  
Verizon  
1515 North Courthouse Road, Suite 500  
Arlington, VA 22201

---

<sup>1</sup> Filed electronically

**CERTIFICATE OF SERVICE**

I hereby certify that on this 8<sup>th</sup> day of April, 2002, I caused true and correct copies of the forgoing Comments of AT&T Corp. to be served on all parties by mailing, postage prepaid to their addresses listed on the attached service list

Dated: April 8, 2002  
Washington, D.C.

\_\_\_\_\_  
Peter M. Andros

V. CONCLUSION

For the reasons stated, the Commission should penalize Verizon for its lack of compliance with section 272, and should immediately re-audit Verizon using appropriate procedures and standards.

Respectfully submitted,

David L. Lawson  
R. Merinda Wilson  
Michael J. Hunseder  
Sidley Austin Brown & Wood, LLP  
1501 K Street, NW  
Washington, D.C. 20005  
(202) 736-8000

Mark C. Rosenblom  
Lawrence J. Lafaro  
Arveh S. Friedman  
AT&T Corp  
295 North Maple Ave.  
Basking Ridge, NJ 07920  
(908) 221-2717

April 8, 2002



(Telecommunications Services Inc (TSI)), because Verizon did not disclose this affiliate's existence until days before the audit was released and months after the audit ended. See *Accounting Safeguards Order* ¶ 203.

\* \* \* \*

In 1997, the Commission recognized that clear biennial audit guidelines and standards would benefit the BOC, its affiliates, and market participants in all telecommunications markets. In recognition of the importance of the section 272 audit, the Commission asked for public comment and received it. However, it never publicly acted on that input and never provided clear and rigorous rules designed to ensure that violations of section 272 are detected and deterred. The Commission should use this proceeding to fill this longstanding gap, and provide a precedent for all the biennial audits to be conducted in the future, including a re-audit of Verizon.

measures would help to limit disputes during the process and to provide for consistent remedies where violations occur.

Fourth, the Commission should substantially strengthen a number of the standards in the existing guidelines. For example, the Commission should strengthen the standard to test compliance with section 272's requirement that a BOC provide certain inbound callers with information regarding their choice of providers for long distance service. As described above, under the current *General Standard Procedures*, the auditors need only observe 15 callers for 30 minutes each, with no requirement about the number of calls that must be monitored. This standard could never adequately determine if the BOC is complying with its obligation. Instead, the Commission should attempt to determine the entire population of calls received that fall within the section 272 obligation, and then using proper sampling techniques, set forth precisely how such samples should be obtained.

Finally, the Commission should adopt guidelines for appropriate remedies and penalties for violations of the section 272 requirements. Such guidelines would help ensure consistency, and would also aid in deterring violations, so long as the remedies and penalties were sufficiently strong.

In this case, as stated above, Verizon's consistent and widespread violations of section 272 must be remedied with appropriate penalties. Moreover, the substantial gaps and holes in the audit procedures also raise the possibility that these violations are representative of a greater pattern of cross-subsidization and discrimination against Verizon's competitors. As a consequence, Verizon and its affiliates should immediately be audited again using more fulsome procedures. Indeed, re-auditing is essential -- and in fact required by the terms of section 272 -- in one respect. no audit was even performed for one of Verizon's 272 affiliates

deviations and population sizes) to enable interested parties to determine if the data is statistically significant under various measures.

Second, the Commission should explicitly delineate the periods that should be audited, and require the BOC to maintain all relevant data for those periods so that the auditors can properly assess compliance with the section 272 obligations. Where the BOC fails to maintain or provide such data, the Commission should presume a violation of section 272. In particular, the Commission should preclude a BOC from, as Verizon did here, limiting the amount of data that it maintains, and then claiming that additional data would be necessary to verify any violations disclosed by the limited data. The Commission should thus clearly state all data that must be maintained and collected, and then broadly define the time period so that all possible discrimination can be detected (thus maximizing the deterrent value of the audit). Additionally, the Commission must make clear that, for a BOC's initial biennial audit, the auditors will examine all transactions and data since the formation of any 272 affiliate, including periods prior to section 271 approval. Most 272 affiliates begin providing interLATA service very soon after approval, and that necessarily requires that substantial activities between the BOC and those affiliates will occur prior to approval. If these periods are not audited, it would allow the BOC a significant opportunity to mask cross-subsidization and other cost misallocation.

Third, with respect to discriminatory conduct, the Commission should adopt rigorous, well-defined, and properly disaggregated performance measures. Since the Commission first acted in 1997, a number of proceedings at the state and federal level have investigated proper performance measures, and the biennial audit process should rely on measures developed in those proceedings, where the measures are properly defined, apply a clear performance standard, and are subject to rigorous testing and are open to interested parties. Use of such uniform

conducted and about the vigor with which the Commission will enforce the pro-competitive provisions of section 272.

With these principles in mind, the Commission should therefore set forth additional standards and procedures to be applied to future biennial audits, including a re-audit of Verizon and its section 272 affiliates. At a minimum, the Commission should adopt the following guidelines.

First, the Commission should adopt a strong preference that the audit make a complete examination of the entire population of any transactions or data that the audit is assessing, rather than relying on sampling. See MCI Proposed Audit Comments, AAD-97-83, at 6 (filed Sept. 15, 1997). As these audits demonstrate, the use of any particular sampling technique is subject to significant dispute, and the results — particularly where insufficient information regarding the sampling is disclosed — are often inconclusive on issues that are central to section 272 compliance. And sampling by definition introduces risks that violations will go undetected. Moreover, in the Verizon audit, sampling was performed even where a complete examination of all data would be practical. For example, in determining Verizon's compliance with the "separate employees" requirements, the auditor inexplicably took a sample of the employees, even though performing a complete examination would not have been burdensome and even though a sample would by definition not detect whether Verizon's employees were truly separate. See *supra* Part III.C.3.

Therefore, the Commission should adopt standards that address both when sampling is appropriate and that further define the specific sampling techniques to be used and the type of information that must be disclosed in the audit. In particular, the Commission should require that, where sampling is performed, enough information is provided (i.e., such as standard